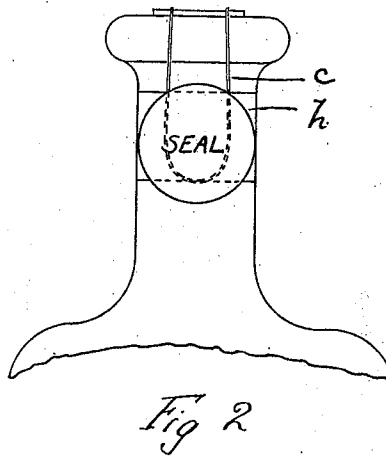
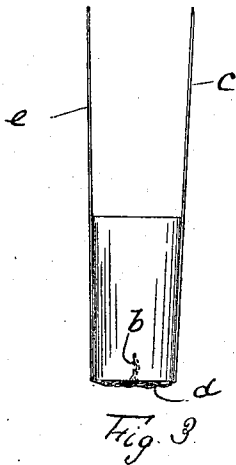
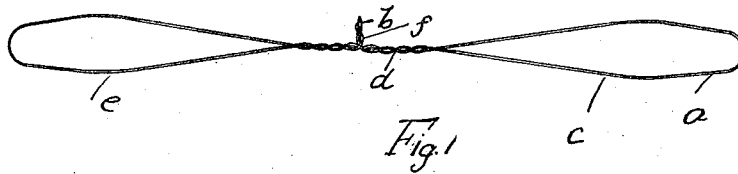


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CORK EXTRACTOR.  
APPLICATION FILED JAN. 14, 1910.

975,384.

Patented Nov. 8, 1910.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FREDERICK L. NORMAN, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO  
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## CORK-EXTRACTOR.

975,384.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed January 14, 1910. Serial No. 538,044.

*To all whom it may concern:*

Be it known that I, FREDERICK L. NORMAN, a citizen of the United States of America, residing at the city of Baltimore, State of Maryland, have invented certain new and useful Improvements in Cork-Extractors, of which the following is a specification.

This invention relates to a device for extracting corks or plugs from bottles or similar receptacles. Although this is its principal function, it also acts as a wedge between the cork and the side of the bottle neck and serves to prevent deceptive substitution of other goods for those originally contained in the bottle.

The cork extractor consists of a wire or other suitable flexible member bent and twisted to form two loops, and having one extremity of the wire bent up intermediately of the loops to form a central prong. A bottle closure of which this cork extractor is an important part is also a feature of my invention. In the use of my device to form the bottle closure to which I have referred, the central prong is inserted in the base of the stopper, the loops are bent upward upon the sides, and the stopper, cork or plug is inserted in the neck of the bottle in connection with which it is to be used. The loops, which it will be understood are inserted for a portion of their length between the sides of the bottle neck and the stopper, are embedded in the latter by pressure against the glass and have a wedge action whereby they increase the resistance offered to the withdrawal of the cork. The free portion of the loops bent downward on each side of the bottle neck is inclosed within an encircling band or seal. To withdraw the cork, the seal is broken, the loops are straightened so that they extend upward parallel to each other, the fingers are inserted in the two loops, and the requisite amount of tension is applied. The two loops described, the four ends of which are joined to each other and to the prong, have an important function in that when they are spread open and led upward along the side of the cork, the four upright strands forming them are spaced along the periphery of the cork and serve to center it and to prevent slipping of the extractor to either side.

An important feature of this device is that the cork may be inserted for its full length and driven downward level with the top of

the bottle, and removed at will without injury, so that the bottle may be opened, part of the contents removed, and the bottle again closed as tightly as when first filled. The wedging action of the wire between the cork and the glass is of great advantage when the extractor is to be used in connection with bottles containing carbonated beverages or other liquids under pressure, as the resistance to withdrawal may be thereby greatly increased. The bent-over loops when secured by a seal or band have an important function, in that they prevent deception of the customer by substitution of a different material from that originally contained in the bottle. While the wires have the function of wedges between the cork and the bottle neck and normally serve to restrict tendency of the cork to come out, they also act when tension is placed on them to facilitate removal of the cork, in that they are, when under tension, drawn into the surface of the cork and form four passages for air to enter the bottle and break the vacuum which exists therein in case of liquids which are bottled when hot and allowed to cool. In the case of corks which flare or have increased cross-section at the bottom, my device is particularly effective, in that it serves when under tension to contract the lower end of the cork and thus make its withdrawal easier.

Although I have described herein in detail a preferred embodiment of my device in order that its nature and operation may be clearly understood, these details may be varied in form and arrangement within the scope of my invention.

A bottle opener or cork extractor made in accordance with my invention is shown in the accompanying drawing, together with a fragment of bottle neck to which it is applied.

Figure 1 is an elevation of a bottle stopper extractor. Fig. 2 is an elevation of a fragment of bottle neck, with a stopper therein, showing the extractor applied to form the bottle closure of the invention. Fig. 3 is an elevation of the extractor applied to the bottle stopper, the loops of the extractor being bent up in position to be inserted in the bottle.

Referring to Fig. 1, the extractor as shown is formed of a single piece of wire (a) bent at right angles at (b) to form a

prong, led to the right as shown in the figure and swung into a loop (*c*), after which it is wrapped about itself at (*d*) adjacent the prong, and led to the left and swung into a second loop (*e*), the other extremity, after encompassing this loop, being wrapped about the main wire adjacent the prong and about the prong itself at (*f*).

In making application of the extractor to the stopper, the prong (*b*) is inserted near the center of the base of the stopper, the twisted intermediate portion is led diametrically across the base and bent at right angles at the sides so that the loops stand substantially vertical and extend upward along the sides of the stopper and for half or more of their length beyond its top. The cork is inserted in the bottle as shown in Fig. 2, the loops being forced into the body of the cork by pressure against the inside of the neck. The cork or stopper may, if desired, be inserted its full length, as previously stated. The ends of the loops above the bottle neck are bent over and brought down against the outside of the neck on each side. A seal or band of paper (*h*), which may be marked with any suitable inscription, is wrapped about the neck over the ends of the loops and secured. It will be apparent that when thus closed and sealed, the bottle cannot be opened, emptied and refilled and closed to deceive the public. The extractor is always at hand and the cork may be replaced and driven in as tightly as desired and remain ready for easy and convenient removal. The cork is not destroyed when thus used and will always form a tight closure for the bottle.

I have thus specifically described a single embodiment of my invention in order that its operation and nature may be clearly understood. I do not, however, wish to limit myself to the details described and shown.

What I claim and desire to secure by Letters Patent is:

1. A bottle closure consisting of a stopper and a flexible member in the form of two loops, a prong inserted in the center of the stopper base, the four ends of the two loops being joined to the prong and to each other, the stopper having a full circular cross section and the loops being opened so as to embrace the stopper at points widely spaced along its periphery and led upward at each side of the stopper above the bottle neck.

2. A bottle closure consisting of a plug inserted in the bottle neck and a flexible member, the latter consisting of a wire doubled upon itself and twisted to form two loops, one at each end of the twisted portion, the wire being bent at right angles to the twisted portion intermediately thereof to form a prong, the twisted portion of the wire extending across the base of the plug, the prong being inserted centrally thereof and the loops extending upward and at each side of the plug and protruding from the bottle neck.

Signed by me at Baltimore, Maryland, this 12th day of January 1910.

FREDERICK L. NORMAN.

Witnesses:

EDWARD L. BASH,  
EDWARD A. MOLLER.